

## Climate Change in Barbara Kingsolver's Homeland

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### Abstract

Climate change is a vital topic explored throughout the world. Drastic change in the environment occurs from the deepest of the oceans to the exosphere, the end of the Earth's surface. Fictions including the environmental change or the disaster are categorized under Cli-fi or climate change fiction which reverberates through the fact of deforestation, encroachment of forest land, poaching and killing of the endangered species, using of pesticides and insecticide to food produced, increase in global temperature, and change in season. Homeland, a cli-fi novel is a collection of different stories focusing on human's ability to demolish, disintegrate and destroy the elements in nature.

**Keywords:** Cli-fi or Climate Change Fiction, Ecosystem, Seasonal Change, Transformation, Encroachment

### 1. Introduction

What will be Earth in another 10 years? What will be the future of our children? Will the animals be an artifact in the museum? What will happen to the trees and the forest? Will the snow of the Arctic melt and engulf the land? These are anxious questions in the minds of the people when the topic climate change comes for an argument. Climate change is a pivotal theme of movies, television shows, social media, novels, fictions, plays, short stories and poems.

Climate change a burning topic dealt upon everywhere in the contemporary situation. Climate is the condition of the weather in measure of precipitation, temperature and intensity of wind recorded in a period of time. Change in these factors results in climate change, change in climate is an expression of a long-term processes. Reidy Chris, in his article talked about two categories of climate change "Natural Climate change" and "Anthropogenic Climate change". Natural climate change occurred due change in Earth's orbit, volcanic eruption, radiation and energy of the sun. Anthropogenic climate change happened due to the activity of people such as burning of fossil fuels, deforestation, and emission of greenhouse gases from the livestock farming. The greenhouse gases such as carbon dioxide, nitrous oxide, methane and fluorinated gases helps trapping the heat energy of the sun to create perfect livable condition it is defined as greenhouse effect. "The "greenhouse effect" because the principle is similar to a greenhouse, where the glass roof allows sunlight in but traps heat for growing plants." (Reidy 2016). The greenhouse gases were emitted beyond their average levels resulting in the global warming.

The global warming was responsible for the change in climate. Climate change and global warming went hand in hand together, the cause were drought, change in wind pattern, rainfall and snow, flood, heat waves, fire weather, change in season, migration of animals, thawing of the arctic snow, change in plants life cycle, and increase in average temperature are the effects of global warming and climate change. Human activity such activity such as clearing the forest for agriculture and cities shrunk the forest lands and increased the emission of carbon dioxide in the atmosphere. The carbon dioxide emitted had less forest sink to absorb, and the emission of

fossil fuels, livestock agriculture food waste aided in the rise of CO<sub>2</sub> in the atmosphere. The increased emission of greenhouse gases instigated rise in global temperature by 1.02° C in 2020. My paper analysed climate change, its root causes, and its effects through Cli-Fi climate fiction.

Climate change fiction or Cli-fi is a term coined by Dan Bloom, a journalist who wanted to give a name to identify the novels of the new trend elucidating the changes in the environment. The concept of climate change in novels started as early as the 19th century and continues till date as the change in the environment is more rapid. Climate change fiction provided a vivid picture to the readers than any graphical representation and temperature maps that record the difference in climate. In fiction , Jules Verne's novel *The Purchase of the North Pole* was the first climate change fiction, later preceded by J G Ballard's *The Drowned World*, Susan M Gayne's, Michael Crichton and Margaret Atwood were prominent climate dystopian novelist. Other prominent Climate fiction novelist were Ian McEwan, Jeanette Winterson, Barbara Kingsolver and so on

Barbara Kingsolver's *Homeland* is a collection of short stories draws a vivid picture of the condition of nature and through the light on the changes in the climate which are so drastic and inevitable. *Homeland* talked of the story of Great Grandmother who belonged to the Bird clan, a tribe lived in the forest for many centuries. The Cherokee tribe consisted of seven clans originating from the Appalachian mountain region, each clan represented some connection between human beings and nature. The eviction of the seven clans from the forest was ordered by the tyrannical ruler President Andrew Jackson, and was instigated by General Scott. He chased the seven tribes from the forest to the westward, eradicated the forest for gold, and burnt the house to hustle up the evacuation. The tribe escaped his sight, but realized their young ones and the elderly would be a burden, so they put them in deep cane grove and left them in the forest to die. Scott represented the domination of human being over nature, and could disrupt the balance of connection between nature and human beings. "General Winfred Scott was in charge of prodding the people from their beds and removing them westward."(1) The evacuation signified the anthropocentric attitude of people to take an upper hand on nature.

Great Mam was one of the refugees who escaped from the forest. She lived a calm pleasing life amidst nature's abundance in the forest, but she was forced to experience drench of mechanical city life. "the air at night smelled of oil and dust and faintly of livestock,"(5). She realized the souls of the dead elders and little ones mingled with nature ,so related the elements in nature and addressed the stars as small people, dogs as little cousins because she believed that the souls of the dead young children and elders rooted in nature to attain back the lost connection with nature. She told Waterbug's mother that "it would have been enough just to have the limas without the meat... There's no shame in vegetables."(7). Great mam taught Waterbug the ways of life to live amidst nature:

A flower is alive, just as much as you are. A flower is your cousin...Sometimes a person has got to take a life, like a chicken's or a hog's when you need it. If you're hungry then they're happy to give their flesh up to you.(11)

Great Mam taught her the deep connection that human beings and nature share. She pondered on the days when people hunted animals only when they were hungry, but later became the habit of butchering. As Carol J Adams in *The Sexual Politics of Meat: A Feminist Vegetarian Critical Theory* stated the habit of butchering would lead to extinction of animals "without the animals there would be no meat eating, yet they are absent from the act of eating meat because they have been transformed into food."(51)

Great Mam wanted to see the forest she lived in before her death, the place where she grew up transformed drastically and the forest turned into constructive areas. The disappointment had led her to depression where Great Mam was distressed because she could not even recognize the traditional costume of the Cherokee tribe "I don't know what they think they're doing. Cherokee don't wear feather bonnets like that...I've never been here before."(18). The seven clan of the Cherokee tribe protected the forest, animals and their own people even though they hunted animals for food and honour, they seemed to be conserving their habitat. Clearance of the forest and mountain region started when the tribes were forced for evacuation. At last, she died without her last wish being fulfilled, the forest which was once close to her heart which held up the spirits of the dead children and elders were gone.

In *Blueprint*, Lydia was the protagonist of the story shared a progressive relationship with nature. She considered the bugs and the trees were "related to her in a complicated family tree that Lydia can describe in convincing detail."(26) She worked as a school teacher, teaching them animal habitat. She explained her husband about the destruction caused due to flood, old people in that place believed that the change in weather was the result of the bomb test. The weather became warmer rather than cold and snowfall. According to an article in *Climate News Networks' Nuclear tests affected the Earth 60 years ago* by Tim Radford "Nuclear radiation ionizes the matter in its path to create electrically-charged atoms and molecules... and this affects the size of the droplet and the volume of the rain that is, the rain doesn't fall at all until the droplet gets big enough."

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Lydia understood the fear among people, because of global warming. The change in seasons, increase in the volume of rain and alteration in the weather were due to the test bomb blast run to protect their country. "So many bridges are out, the buses can't run. One of the bridges washed away in flood"(36) She taught her class the special information about imprinting of ducks which was examined under a scientist Konrad Lorenz. Being a lover of nature, she became furious by the cold-hearted behavior of the scientist to waste the lifetime of experimental ducks just for the benefit of science. The life of the experiment animals ends behind the barren cage, they were traumatized physically by toxic medicines, psychologically without exposing them to the outer life, and many animals were laboratory bred. The animals after the experiments were killed, burnt to death

In *Quality Time*, Miriam talked about shifting in seasons, and change in the weather as it rained in winter. She even foretold the normal seasonal change that happened during her days would only be in the textbook of her daughter, Rennie "if for her sake they ought to live someplace with ordinary seasons- piles of raked leaves in autumn, winters with frozen streams and carrot-nosed snowmen. Someday Rennie will read about those things in books, and think they're exotic."(64) Transformation of forest and cultivable lands into malls and construction site, Miriam told "the world's anguish doesn't remain mute- like the falling in the forest just because no one is standing around to hear it."(66) She also talked about the sudden drastic rain which warned the people of the upcoming natural disaster due to deforestation. Deforestation and cutting up of trees results in soil erosion, clearance of the top soil and flash floods. As Kelly MacNamara studied in her article "warming effects of greenhouse gases began to dominate, driving stronger and more volatile rainy season the warming effects of greenhouse gases began to dominate, driving stronger and more volatile rainy seasons". Increase in the global temperature caused increase in the volume of the rain, the rain would not fall until it becomes larger in size, and the increasing in the volume ends up in sudden down pour of enormous amount of rainfall creating flash flood that could wipe out an entire village.

In *Survival Zone*, Roberta talked about the family farm of her husband Ed as they raised livestock, planted corn, and apple orchard which were now transformed into roads by the explosion of H-bomb by the Russians. Roberta mentioned with strange burden in her mind, "she's heard people speak of the whole rivers becoming dead, of something destroying all the oxygen."(111). The oxygen depletion in the rivers, seas, oceans are known as hypoxia. Hypoxia occurs due to the input of chemical, dumping of waste like biohazards, industrial and human waste, pesticides and insecticides were dumped down into the water resources. She was confused by the change in the season; it was still warmer rather than snowfall in the winter.

In *Extinction*, the protagonist talked of the endangered species which were on the verge of extinction. Grace saw the westerners who came out of the forest with the skins of pandas in a wooden frame as a display of their heroism and bravery in just a bullet, but only later, after drastic decrease of the animal people realized the importance of the ecosystem. "the program shows an old film clip of men emerging in high leather boots from the bamboo forest, holding up panda skins stretched on wooden frames"(168). Poaching of animals resulted in the imbalance of the animal kingdom, and transformation of the food space of the animals to cultivable and constructive lands for the human demolished the ecosystem. The anthropocentric inquisitiveness in exploring oceans, technological invention subsequently came to messing up with the ecosystem beyond any healing. "Poaching has devastating consequences for wildlife. In some instance, it's the primary reason why an animal faces a risk of extinction." regrets Jani Hall in *Poaching Animals, Explained*. He also added "illegally taking animals from the wild threatens many species with extinction." Grace was frustrated by the damage people had already made to the oceans, ozone and practically the ecosystem. Jacob knew the number of endangered animals like tigers and gorillas living in the forest and zoo. "Jacob knew all the numbers: how many tigers are left, how many mountain gorillas."(169). Due to the pesticides and insecticides sprayed in the food, the food consumed became poisoned resulting in cancer and many deadly diseases in human beings "There's someplace that knows when things start to get poisoned, but they try to keep it a secret."(168)

In *Island on the Moon* Kingsolver brought out a different protagonist, Magda is a forty four year who took some approaches to conserve the environment or rather not harms the environment. She wore sandals and dresses purely made of cotton and she made necklaces from the bones of non-endangered species. She had reverence to the other living organisms in nature to protect and conserve it. She was one of the conservationist disdained her daughter from using hairspray because it would cause depletion in ozone layer. She wanted to create a safe and wonderful world for her daughter and grandson. "She intends to leave her life savings, if any, to save the Planet, and tells Annemarie should be more concerned about the stewardship of the earth"(123)

Annemarie spoke of the seasonal change, the sun scorched during spring created a mirage in the roads. "It has been an unusually dry spring, ...Some people deeply missing the Midwest, have spray painted their gravel green."(133) According to the article *Responses of Tropical Trees to Rainfall Seasonality and Its Long-Term Changes*, the climate change and the variation in seasonal change was explained by Borchert "Climate change

scenarios predict that global warming is unlikely to alter the climate of aseasonal tropical... but will result in declining annual rainfall and prolonged seasonal drought in parts”(241)

A contrast of thought runs between the life of the mother and her daughter Annemarie. A difference in belief between two generations, the mother, Magda, who wanted to conserve nature by using, recycling the things from the environment like cotton dresses, jute bags, organic shampoos, and organic cooler pads from the fibers plants, but Annemarie uses more of plastic, use and throw plastics which pollutes the environment, using perspiration to spike her hair harmful to the ozone. Magda was apprehensive of sonogram and big needles, she mentioned of “Thalidomide babies”(141) when they met with an accident, she emphasized on the wrong medication such as Thalidomide which was used for morning sickness in pregnant women, and resulted in phocomelia, malformation of human arms and legs. “In addition to the limb reduction anomalies, other effects... included congenital heart disease, malformation of inner and outer ear, and ocular abnormalities”(James 2011)

The novel *Homeland* being the collection of different stories called attention to the effects of climate change like deforestation, transformation of the forest area to construction site, change in season, extinction of different types of species in the forest, and spraying of harsh chemicals in the plant causing severe disease to the consumers. “Retracing the steps for greener tomorrow” is done by reforestation/ afforestation, organic farming, minimalizing the use of fossil fuel, protecting wildlife and the ecosystem.

## References

- [1] Adams J Carol, 1999. *The Sexual Politics of Meat: A Feminist-Vegetarian Critical Theory*. New York:Continuum.
- [2] Borchert R. (1998) Responses of Tropical Trees to Rainfall Seasonality and Its Long-Term Changes. In: Markham A. (eds) *Potential Impacts of Climate Change on Tropical Forest Ecosystems*. Springer, Dordrecht. [https://doi.org/10.1007/978-94-017-2730-3\\_10](https://doi.org/10.1007/978-94-017-2730-3_10)
- [3] Hall, Jani. Poaching Animals, Explained. *National Geographic*. Feb 12, 2019.
- [4] James H. Kim, Anthony R. Scialli, Thalidomide: The Tragedy of Birth Defects and the Effective Treatment of Disease, *Toxicological Sciences*, Volume 122, Issue 1, July 2011, Pages 1–6, <https://doi.org/10.1093/toxsci/kfr088>
- [5] Radford, Tim. 2020. Climate News Network: Nuclear tests affected the weather 60 years ago. ([Nuclear tests affected the weather 60 years ago | Climate News Network](#))
- [6] Reidy Chris. *Climate Change*. Blackwell Encyclopedia of Sociology. Blackwell, 2016